

DOLPHIN ASSISTED THERAPY: INNOVATIVE LEARNING FOR CHILDREN WITH DISABILITIES

Brigita Kreivinienė

Klaipėda University, Lithuania

Juha Perttula

University of Lapland, Finland

Abstract

In this article the dolphin assisted therapy is presented as an innovative method of learning for children with disabilities. The historical overview of dolphin assisted therapy is introduced. Currently it has received the legal recognition in Lithuania and expanded to family-centered programs. Newly developed dolphin assisted therapy program can be integrated into the education process of the child with disabilities as well as the whole family system. The **aim** of this article, then, is to focus on the dolphin assisted therapy as the classic form of animal assisted therapy, and to analyse how the dolphin assisted therapy has gained its current status as an innovative learning method for children with disabilities and their family members in Lithuanian society.

Research methods. Qualitative research was conducted with content analysis. Ten families raising children with cerebral palsy participated in the research. The research results brought to the light that educational sphere supports families' wishes to visit dolphin assisted therapy, educators highlight the experiential aspect of the whole family. The research results are important for constructing the collaborative joints of educational sphere and dolphin assisted therapy.

KEYWORDS: learning with animals, dolphin assisted therapy, children with disabilities.

Introduction

In Lithuania, rapid structural changes in providing support to children with disabilities occurred after the regained independence in 1990. Together with economical, political, societal and cultural transformations, also several educational changes emerged. Integrated education, novel ways to teach and the modification of national curricula based on the abilities of children become real in Lithuanian everyday educational practice.

The new legal system manifested a huge change in social attitudes towards disabilities. The term of disability appeared the first time in the Law on Social Integration of the Disabled (Lith. Language - *Neįgaliųjų socialinės integracijos įstatymas*) released in 2005. This law opened new possibilities for people with disabilities (Gudžinskienė and Jurgutienė, 2010, p. 21). Together with this law the Lithuanian society adopted the interpretative stance on disabilities. Hence, disability was perceived broader than before. New interpretation of disability implied not only biological but also social aspects. The law mentioned above created new official terms like disability but also figured out a functioning system of social integration guaranteed by the state. In this new attitudinal climate the “value” of a person was understood in wider sense. Besides the academic records the value of a person was understood via sensual experiences, emotional expression, and other psychoemotional human aspects. In general, the vital sources in making a person valuable were now the process of expression oneself as a human being instead of the previous emphasis on the personal results.

In the current Lithuanian society the complementary and alternative medicine (CAM) methods as a means of possible support for children with disabilities are available more than ever before. Practitioners of special education seem to be open in seeking the new practices for innovative learning. Therefore, also varied animal assisted therapies have got more space in educational practice. In this article the focus is on Dolphin Assisted Therapy (DAT) as one innovative method of help. Even though the Lithuanian interest in DAT is linked to the recent attitudinal societal change, there has been an interest in animal-human interaction already in the ancient Greece. The historical documents display a belief that a human contact with animal sustains a better emotional and physical wellbeing in humans (Macauley, 2006; Nimer *et al*, 2007). Animals started to be used for educational and therapeutic purposes in 19th century (All *et al*, 1999; Heimlich, 2001; Velde *et al*, 2005; Macauley, 2006). Altschiller (2011, 11) writes that there are various animals, such as rabbits, dogs and cats, that has found to have positive effect in animal assisted therapies towards children. One famous example is the R.E.A.D. (Reading Education Assistance Dogs) that was a comprehensive literacy program involving children reading aloud to dogs in nonjudgmental presence. The results were not only improvement in

academic records as better reading skills but also psychoemotional development as better contact with other children, less fears and better belief in personal abilities. Altschiller (2011) claims that even though the development in medicine and healthcare is real and people get to be aware of it in everyday life, the holistic attitude towards all health issues is needed. He (ibid) describes various facts from the history of animal assisted therapy when children who were labeled for instance as “severely disturbed, uncommunicative and psychologically disturbed” reacted positively to the presence of animals.

Such discoveries allowed developing methods where animals are the partners for the humans in special education programs, healing processes, social support mechanisms, and residential care programs. Altschiller (2011, 3-4) states that various programs in which the animal assistance was used showed that animals have a significant meaning in positive human change as they can „awaken the social and benevolent feelings“.

The aim of the first dolphin assisted therapy sessions organized by volunteers was to increase the quality of life in children with disabilities and their family members (Heimlich, 2001, 48). Later, scientists discovered that participation of dolphins in educational process increases children's abilities in learning (Kreiviniene, 2010). There is a great number of scientific publications since 1981 concerning the dolphin assisted therapy as a new method of learning. For example, the very first study of Smith (1981, cited in Nathanson, 1989) revealed the great motivation of children with autism to develop verbal speech. Nathanson (1989) proved that learning with dolphin is quicker and longer-lasting (meaning, longer keeping in memory) and the results are much better compared with children without the presence of dolphins. Nathanson and de Faria (1993) measured considerable cognitive advancements in children with severe mental disability participated to DAT. The analysis of encephalograms showed that dolphins relax people (Cole, 1996; Birch, 1996; Brensing, 2005). Brakes and Williamson (2007) revealed that the procedure of operant conditioning can enhance eye-concentration and learning motivation when communication with dolphins is used as reinforcement.

To sum up, the multiple reviewed scientific studies suggest that it is realistic to regard an animal assisted therapy as an innovative learning practice, which can be integrated into the education process especially for children with varied disabilities.

The **aim** of this article is to focus especially on one classic form of animal assisted therapy, namely dolphin assisted therapy, and to analyse how the dolphin assisted therapy has gained its current status as innovative learning method for children with disabilities and their family members in Lithuanian society.

Historical-scientific background of dolphin assisted therapy (DAT) in Lithuania

The DAT program at the Lithuanian Sea Museum was launched in 2001. Registration to this kind of therapy program was during the opening and in 2006 because of high interest of parents and little possibilities to organize it in the Lithuanian Sea Museum. Parents from Lithuania, Russia, Poland, Latvia, Ireland, and Belarus hoped to bring their children to DAT (Lietuvos jūrų muziejus, 4–9). The DAT program at the Lithuanian Sea Museum till 2007 was very small providing the only service for families – session with dolphins for child with disability. Such a two-week program with 30 minutes daily intervention with dolphins could not satisfy the need of support. Supportive work with family members was very narrow. The sessions with dolphins were arousing various states and expressions in children (language, emotions, cognitive understanding) and still no additional support for their development and anchoring could be arranged. In 2007 Lithuanian Sea Museum closed the Dolphinarium for the reconstruction and development of dolphin assisted therapy centre.

Since launching the dolphin assisted therapy program, many research streams has started. Till 2013 the dolphin assisted therapy was categorized to the branch of complementary and alternative medicine and various aspects of DAT were under investigation and discussion. The ideas were presented that DAT may cure some illnesses or change the person's physical status. However, the studies showed that DAT is not primarily a subject of medicine. It appeared that the positive effects of DAT are related to the phenomena of the fields of special education, social work and psychology.

In Lithuania, the aspects of dolphin assisted therapy have been analysed by Rugevičius, Kirkutis, Žakaitienė, Šostakienė, Kirkutyte, (2006); Šostakienė, Kirkutyte, Baliūnienė, Kirkutis, Rugevičius, Kreiviniene (2007), Kreiviniene, Rugevičius (2009). The main idea of DAT organized at the Lithuanian Sea Museum was based on the reinforcement theory. The studies showed that children with autism after ten sessions of DAT exhibited increased functioning of sensory motor, sleep, and self-independency. The

best results were shown in decreasing of sensitivity to touching. Changes in cognitive functions were not observed (Šostakienė *et al.*, 2007, 729–733; Rugevičius *et al.*, 2006, 101–103; Kreiviniene and Rugevičius, 2009, 25).

However, DAT as reinforcement did not always work. It worked well with children with developmental disability but not with physical disabilities. It has showed that for example in severe cerebral disability cases, DAT is seen as a whole family therapy program that offers positive emotional experiences and improves the interaction between the family members (see Breitenbach *et al.*, 2009).

One of the last scientific studies made in Lithuanian Sea Museum before closing it for renovation was done by Kreiviniene and Vaičekauskaitė (2010, 3544). They (ibid, 3544) conceptualized the DAT as having a strong positive impact on family's sense of coherence, especially having a child with severe disability. Their (ibid, 3548) research indicated that changes in child's behavioural, emotional, and social competencies are significantly influential on the functioning of the whole family system. After participation in DAT the positive changes that were observed in children's interpersonal communication, behaviour, speech, perception of rituals and other spheres tend to decrease the continuous stress and tension that family had. Research results in DAT revealed that qualitative psycho-social changes of children with diversified development disorders can be reasonably interconnected with the sustaining of the whole family health.

Due to the scientific input and relevance in the field of dolphin assisted therapy as a method of support in disability situation, dolphin assisted therapy was officially approved as a method of wellness by the Ministry of Health in 2013. Lithuania became the very first country in Europe legalized this type of animal assisted therapy. Besides the norm of hygiene HN 133:2013 (LR Sveikatos apsaugos ministro įsakymas, 2013 m.balandžio 15 d. Nr. V-374) was released at the same time, which regulates safety and quality of dolphin assisted therapy.

Currently the Lithuanian Sea Museum is establishing the dolphin assisted therapy center, which is a structural department of Lithuanian Sea Museum in a unique complex of sea nature and historical cognition. The foundation of this center is financed by structural funds of the European Union, budget of Lithuania, and the finances of the Lithuanian Sea Museum. It is planned that the dolphin assisted therapy center opens its doors in the beginning of 2015. This newly established center will be able to provide support to families and children with disabilities with broader focus than providing solely the dolphin assisted therapy. The previous studies figured clearly out that families need consultations both during and after the dolphin assisted therapy program. It is planned to expand the services also into special education programs and creating collaborative networks with teachers and other educational personell working in child's living environment.

Research methods

Empirical research was conducted from 2007 to 2010 in the Lithuanian Sea Museum; data was analyzed in 2011 and 2014. Depth interviews from 1 to 3 hours were performed with 10 families raising children with cerebral palsy. Content analysis was applied (Henwood, Pidgeon, 1994, 227; Huberman and Miles, 1994, 431, cited in D'Cruz and Jones, 2004) to analyze the interview material. Open coding was used by making notes and headings to the transcribed interview texts. Later, these notes were discussed with the families and primary categories were created. Hence, we maintained content analysis as a phrasal analysis the most beneficial. Similar phrases found from the research material were counted and the number was put in the brackets (in the analysis part).

Selection of research participants

Before starting the research we had a clear idea of the possible research participants. The list of them was formed¹ in 2001 and 2004 when parents wishing to participate in DAT program at Lithuanian Sea Museum registered their children with various disabilities.

Among the children who were registered to the list since 2001, only children with cerebral palsy had not been selected to take part in DAT. Therefore, we decided to sample every child from the list suffering from complex cerebral palsy.

¹ Only these two times Lithuanian Sea Museum registered participants to DAT program. Because of huge popularity additional registration was not needed.

The primary selection was made on the holding data, including the general descriptions on child's state. From the total of 160 participants 50 potential respondents were sampled. In this stage we had the phone conversations with these 50 families. In conversations, the nature of the research was discussed. Besides, additional information about the family situation was gathered.

By using additional information as a selection criterion, 13 families who were the most suitable for the research were chosen. If families met the selection criteria equally, the priority was given to the families who had waited longer in the list and having child with more signs of complex cerebral palsy disability. During the research process one family decided to quit the research as their child was suffering from severe epilepsy. This family was substituted to another. When having the final list of families we prepared interview calendar for the participants.

Other factors for the participants were as follows:

- Age of child 4–15 years.
- Being registered in DAT list from three to six years ago.
- Registered the first time to DAT program in the Lithuanian Sea Museum.
- Full family: mother, father and at least two children. One child with cerebral palsy, the second and following children are healthy. This selection criterion was formed to have as homogenous research group as possible.

Table 1 represents essential information about the families who were selected to the interviews. Information shows the city where family came from, number of family members, age of child with severe disability, medical description of the child's diagnosis, and the date when interview was conducted. The case number is the code of the family that is used in the research to guarantee the ethical confidentiality of each family.

Table 1. *Information about research participants (Kreiviniene, 2012)*

Case No.	City	Family members	Age	Diagnosis description (translation is made from the papers parents presented in the first meeting, content is not changed)	Interview conducted (eye-to eye in LSM, by phone or planned visits)
001	Biržai	4	9	Severe cerebral palsy, displexia, situation after legs-lengthening operation, developmental disorder, blindness, ecopresis, enuresis.	2007/10/13 2007/10/16
002	Elektrėnai	4	9	Severe cerebral palsy, discynetic paralysis, respiratory infections.	2007/10/13
003	Klaipėda	5	7	Severe cerebral palsy, spastic tetraplegia, generalized asymptotical epilepsy.	2007/10/27 2007/11/05
004	Palanga	4	7	Severe cerebral palsy, symptomatic epilepsy.	2007/10/27
005	Kaunas	5	6	Severe cerebral palsy.	2007/11/12
006	Mažeikiai	4	12	Severe cerebral palsy, spastic displexia, deafness.	2007/11/12
007	Vilkaviškis	4	4	Developmental disorder, child is not walking, tone of muscles high and low, strabismus, farsightedness, hearing difficulties.	2007/11/26 2007/12/03 2008/02/10
008	Plungė	4	14	Severe cerebral palsy after meningoencephalitis, child is suffering from severe involuntary movements, when he wants to do something and cannot, cannot talk or chew.	2007/11/26 2007/12/06 2008/07/20
009	Kupiškis	4	7	Severe cerebral palsy	2007/12/08
010	Telšiai	5	4	Severe cerebral palsy, spastic tetra paresis, symptomatic epilepsy.	2007/12/09

Research credibility

Kimberlin and Winterstein (2008) mention that credibility of a content analysis *has to be constructed by researcher and that it is grounded in empirically based descriptions*. In this study, research credibility was constructed according to the following research decisions:

- **Sampling the respondents**. Families were gathered very carefully taking into account all mentioned criteria as following: similarities on their history, social situation as a full family, and diagnosis of one child in families.

- Duncan (1989, cited by Elo and Kyngäs, 2008, 109) notes that the sample is like **representative of the universe** from which it is drawn. Due to our sampling procedure we had 12 families in total as possible respondents, from which, due to the criterion of precedence on the list, 10 families were finally picked as *representative of the universe*.

- **Participation of families**. Johnson (1999, 283) writes that discussion about the researcher's interpretations together with the actual participants is meaningful for verification and insight of the results. Therefore, as a part of the content analysis, open-coding was applied on re-watching the filmed interviews for discussing the categories formed in the analysis with the families. In practice we discussed together the meanings put into the text. The main idea of such discussions was to verify the researcher's understanding of what the families had represented by their talk. Already Habermas (1973, 215, cited by Moilanen, 2000, 384) has stated that in gathering feedback it is meaningful to construct the unforced dialogue so that participants can evaluate and strengthen their arguments. Thus we created, together with the families, the primary categories reflecting the idea of families' representations as closely as possible to the meanings they intended.

Families were asked to speak about dolphin assisted therapy in a connection to educational sphere. The main idea of research was not anyhow make comparisons of those two branches of support, on the opposite, our goal was to look for similarities and possibilities how one method can be helpful in one another. Experience in the previously mentioned studies proved that special education and animal assisted therapy can be seen in collaboration because of better results in a wide sense from academic records to more positive personal experiences.

Research results

Content analysis was applied to five main categories of the interview data:

1. *DAT as innovative learning: inspiring possibilities*. Families were saying that educators were speaking of DAT as newly developed method of improving child's status.
2. *DAT as innovative learning: sceptis vs. hope*. Families represented their feelings and expectations towards DAT that were sceptically met by some educators.
3. *DAT as innovative learning: putting power over professionals*. Families represented a peculiar manner of control in learning environment in order to protect child from unexpected circumstances.
4. *DAT as innovative learning: physical and emotional progress*. Families represented how DAT program is seen from the position of physical enhancement and emotional change of all the family.
5. *DAT as innovative learning: winning*. Families were speaking of confrontation in the opinions – willingness to participate in therapy program and meeting negative attitudes or doubts about possible resultiveness.

Analysis of the research material implied five main categories concerning the dolphin assisted therapy related to educators prescribed by families raising children with cerebral palsy. The categories are: **inspiring**, **sceptic**, **putting the same power**, **progress** and **winning**. The category *winning* has of sense when two people or opinions fight and a third wins, therefore, more negative than positive connotation was attributed to it.

The analysis of the educational sphere dealing with DAT revealed two sides of comparison: professionals' representations (supportiveness) towards DAT and the result (already displayed or projected).

The category of educators *inspiring* (10) presence in the DAT program were expressed by all families. The families represented that educational specialists were not only supportive towards them, but they also strengthened the positive expectations about the therapy results in an encouraging way.

Family case 009: *Everybody was happy, said that it would be great in there (...) everybody had good emotions.* Family case 002: *The speech therapist said she is glad we were going, but she did not know anything about DAT.* Family case 005: *Our speech therapist is waiting for us to come back as her relatives have always wished to participate in this programme.* Family case 001: *Teachers were very glad that we were accepted to DAT and waiting us to come back and tell everybody in our school our experiences.*

Families represented that, in DAT, specialists who came from the educational institutions were more supportive than neglecting. Families described that mostly all educators put a lot of expectations together with families to get the child's status better and create positive emotional experiences. Some of the families (cases 002, 001) even said these specialists were waiting for them to come back and share their experiences with other families waiting their turn to participate in DAT. Educators strongly supported such idea and therefore families felt exceptional as *everybody is waiting for their coming back and sharing their experiences*. Especially mothers were expressing how teachers were emphasizing that even if the therapy will not be helpful the whole family will experience only positive emotions there together. In general, the representations towards DAT were positive, probably because families were happy when had finally invited to the program after being many years in a waiting list.

The category of *sceptic* (1) educator towards dolphin assisted therapy was represented by only one family which has been in a constant battle with many legal systems that provide governmental services (medical, social, and educational).

Family case 003: *The educator was sceptical. She said one child after DAT became worse. She'll become aggressive. (...) Educator gave one example of child who came back from the similar therapy and child started to stimulate herself.*

Although one educator wanted this family to avoid dolphin assisted therapy visit, family said that there was no doubt that they need this participation. Such strong willingness was laid by everyday hoping that one day child will move a finger or spell a word, or have "different" glance. This family said that before they had some contacts with dolphins abroad and listened dolphin sounds at home, so their expectations were made on their personal observations that child reacts emotionally to these animals.

Family case 003: *You know after seeing dolphins in Sebastopol, she looked at me... For the very first time in my life I saw the meaning in that glance.*

When child suffers from severe cerebral palsy and seems that cannot do anything more, such change in glance can be the only supportive aspect left for a family. Non-verbal communication for such families is having higher value than any academic achievements.

It was highly interesting that families coming with so many hopes towards DAT very quickly opened another side of expressions – power because of the protection. Families were telling the stories how devalued they had felt themselves during the years of raising their children and how harsh attitudes the professionals may demonstrate to them. Therefore, it appeared that families had learned a peculiar method of behavior, which means demonstrating own power over all professionals they meet to protect the child from suffering, medical experiments, and negative attitudes. Families tend to *put the same power* (3) in the beginning of forming the relationships with DAT specialists. Families, logically to the behavior they had learned with professionals, stressed that the power position they adopted also in DAT over professionals was realistic and meaningful for them.

Family case 008: *It would be good to be advised... like we speak with our physiotherapist at school.* Family case 001: *We are parents living with our child 7/24 and that means we know the best. So, whoever is going to work with our child, he or she must consult with us and proceed the reactions of child.* Family case 007: *We saw many negative views towards our child. Some professionals even do not hold our child a human being... Yes, he cannot react a lot, he cannot speak, he cannot ask or answer questions, but he is my son and that's the most important. I will defend him till I am alive.*

The term *habitus* is used to imply the process, in which a mutual communication creates a sense of certainty about how people will behave together, for instance how helpful or unhelpful they will be. In this way a family participating to DAT is setting the same power they have previously learned in all new relationships with professionals and specialists to create a safety niche for the whole family including the child. Hence, the negative experiences tend to cumulate because the families rarely have positive and reliable attitude towards professionals before meeting them in DAT the first time. The consequence is that

if a new professional in DAT is better expert than the family has met before, the family may still be unable to utilize the expertise because of the negative orientation.

Family case 003: *I brought many items and said many recommendations in school how to work with my child. But I see that educators do not listen and do not use the items I bring... That's really upsetting.*

The category of **progress** (2) represented the situations where the families in DAT recognized the positive change in the child, which had not occurred before in any help or support provided by the educational sphere.

Family case 005: *Dolphins made a huge impact for her...she was not afraid though the dolphin is big (...) even for me it was uncomfortable. And she had already thought of something... she raises her eyes up and this is seen that the child was thinking.*

Breitnbach *et al.* (2009) made the vital finding about DAT that even if educators do not see any change in a child's status, there is an obvious change in parent-child interactions. Regardless of physical status, the child will communicate better and social-emotional behavior will be developed². Therefore, our research repeats the same results and specifies that families raising children with severe disabilities highly value non-verbal changes in child's expressions. To put it concrete, for the parents the eye-contact communication with their child is much more important than child's academic achievements. There are the reasons to call dolphin assisted therapy as an innovative method of learning of family communication.

One family case represented a specific achievement in DAT.

Family case 002: *Maybe he could say a word (...) the speech therapist in kindergarten forced him to spell 'mother', 'grandma', but I cannot do that.*

The mother had never heard the child saying a word but in the kindergarten the child spells those words, so it would be important for her to hear the first words from her child. A family creating parent-over relationships perceives the spellings of the child in educational institutions as losing a war. Instead of creating any sort of power-together, they tend to seek DAT like a second chance to win. It appeared that such wishes are lead to disappointments and tiredness to seek academic records. Therefore, instead of giving ideal expectations, it is important in DAT to value even small expressions and experiences of being together and feeling together.

However, the changes are not always the tiny ones. One family described rapid changes in child's abilities already after a few DAT sessions as follows.

Family case 005: *For example there were two cars the same in colour, not everybody would distinguish between those two identical cars next to one another, but she did that – she said its mum's car. It was strange...so pleasantly strange.*

It appeared that this developmental jump was highly interpreted as the effect of dolphins that could not be reached in the traditional educational context. The emotional support from the closest persons convinced the parents about the cause and the effect in child's behaviour.

Family case 005: *She changed into better side by no means after DAT. (...) All friends say so.*

When the family receives shared support for their behaviour, the striving to attend DAT is also growing. In other words, as after DAT *parents raises their heads*, they see betterment for the child and it is confirmed in their social network.

The last category is constructed on representations showing the competitive relationships where exists some **winning** (1).

Family case 005: *Educators say she needs some drugs for calming down (...) When we were in the Dolphinarium... so she fell asleep (...) dolphins act as an anodyne.*

The family represents the disagreement between educator and doctor where the educator expresses an opinion on the prescription of tranquilizing drugs to the child and the doctor rejects this opinion. The family takes on the mediator's role in this divergence of opinions. The family (case 005) represented that the answer of the doctor was like: *she does not need any drugs, they would suspend her development.* Therefore, the family sees solving this conflict as winning the third part. In this case it was DAT that could possibly calm down the child.

In summary, DAT in connection with the educational sphere is represented positively, inspired by the personnel of educational system. Families in connection to educational sphere represented more features of personal behaviour than social support for the child or family. They rather created representations that projected the same interaction between them and DAT specialists that was implemented for the educational system.

² According to their parents, measures were made for children with severe disabilities.

Conclusions

1. Dolphin assisted therapy is the example of an animal assisted therapy that could be integrated into special education. The historical overview of dolphin assisted therapy revealed the searchings of “right” place for many years. The very first researches made in Lithuania in the medical tradition did not gave considerable results, however, further researches directed this method towards highly increased results in psychological and educational spheres. Such background allows predicting that dolphin assisted therapy and special education should work more closely interconnected.
2. The research results revealed that DAT can be perceived as an innovative method of learning, as far, educators and families give high aspirations towards qualitative change of child. Neither educators nor parents were expecting academic achievements, the best expected result was named as possibility to interact with child in more understandable way.
3. Research brought to the light a side issue of family life – always the primary and one-sided value given for the child and evaluating the professional position also from that ground. Families that came to dolphin assisted therapy were speaking a lot of dolphin assisted therapy as “harmless and natural” even though in such perception they expressed not being able to build trustworthy relationships to professionals. As a result, families tried to control even all details of professionals' behaviour.
4. Families and educators saw the dolphin assisted therapy as innovative method of learning, which is a process where experiencing is more valued than achieved results. Therefore, it can be stated that the meaning of broader understanding of therapeutic process and human value became explicit in the representations.

References:

1. All, A.C., Loving, G.L. 1999. Animals, Horseback Riding, and Implications for Rehabilitation Therapy. *Journal of Rehabilitation*. July/August/September, 49–57.
2. Altschiller, D. 2011. *Animal-Assisted Therapy*. Oxford: Greenwoon, England.
3. Birch, S. 1996. *Dolphin Therapy Effects: A Hypothesis*. Second Annual International Symposium on Dolphin Assisted Therapy, Available online at: [<http://www.aquathought.com/idadra/symposium/96/birch.html>], accessed 15 March 2010.
4. Brakes, P., Williamson, C. 2007. Dolphin Assisted Therapy: Can You Put Your Faith in DAT? Whale and Dolphin Conservation Society, 1-7.
5. Breitenbach, E., Stumpf, E., Fersen, L., Ebert, H. 2009. Dolphin-Assisted Therapy: Changes in Interaction and Communication between Children with Severe Disabilities and their Caregivers. *Anthrozoös*. Vol. 22, Issue 3, 277–289.
6. Brensing, K. Expert Statement on „Swim with the Dolphin Programs and Dolphin Assisted Therapy“. Third Meeting of the Scientific Committee. Cairo, 14-17, May, 2005.
7. Cole, D.M. 1996. *Electroencephalographic results of human-dolphin interaction: A sonophoresis model*. Second Annual International Symposium on Dolphin Assisted Therapy. Available online at: [<http://www.aquathought.com/idadra/symposium/96/sonophor/sonopho.html>], accessed 19 December 2009.
8. D'Cruz, H., Jones, M. 2004. *Social Work Research*. SAGE publications: London.
9. Elo, S., Kyngäs, H. 2008. The qualitative content analysis process. *Journal of Advanced Nursing*. 62 (1), 107–115.
10. Gudžinskienė, V., Jurgutienė, Ž. 2010. Neigaliųjų socialinės integracijos reglamentavimas. *Socialinis ugdymas*, 11 (22), 18-26.
11. Heimlich, K. 2001. Animal-Assisted Therapy and the Severely Disabled Child: A Quantitative Study. *Journal of Rehabilitation*, October/November/December, 48-54.
12. Henwood, K., Pidgeon, N. 1994. Beyond the Qualitative Paradigm: A Framework for Introducing Diversity within Qualitative Psychology. *Journal of Community & Applied Social Psychology*. Vol. 4, 225–238.
13. Johnson, R.B. 1999. Examining the Validity Structure of Qualitative Research. *Education*. Vol. 118, No. 2, 282–292.
14. Kimberlin, C.L., Winterstein, A.G. 2008. Validity and Reliability of Measurement Instruments Used in Research. *Research Fundamentals*. American Society of Health-System Pharmacists, Inc. Vol. 65 (1), 2276–2284.
15. Kreiviniene, B. 2010. Šeimų, auginančių vaikus su sunkia CP negale, ekspektacijų konstravimo delfinų terapijos atžvilgiu sąsaja su tradicine pagalbos sistema. *Po muziejaus burėmis. Muziejinių darbų ir įvykių kronika*. Nr.1, Vilnius: „Sapnų sala“.
16. Kreiviniene, B. 2012. *Social Support: Voices of Families in Severe Disability Situation*. Lambert Academic Publishing: Vokietija. Monografija.
17. Kreiviniene, B., Rugevičius, M. 2009. *Delfinų terapija Lietuvos jūrų muziejuje*. Klaipėda: KU leidykla.
18. Kreiviniene, B. Vaičekauskaitė, R. 2010. Delfinų terapijos poveikis šeimos sveikatos stiprinimui vidinės darnos aspektu. *Sveikatos mokslai*. Vol. 20, nr. 5, 3544-3548.
19. Lietuvos jūrų muziejus. 2006. *Delfinų terapijos įtaka vaikų su negalia psichosocialinei reabilitacijai. Biomedicininio tyrimo atsakaita Sveikatos apsaugos ministerijos Lietuvos bioetikos komitetui*. Klaipėda.
20. LR Sveikatos apsaugos ministro įsakymas Dėl Lietuvos higienos normos HN 133:2013 “Delfinariumuose teikiamos psichoemocinio ir fizinio lavinimo paslaugos. Bendrieji sveikatos saugos reikalavimai” patvirtinimo. 2013 m. Balandžio 15 d., Nr. V-374.
21. Macauley, B.L. 2006. Animal-Assisted Therapy for Persons with Aphasia: A Pilot Study. *Journal of Rehabilitation Research & Development*. Vol. 43, Nr. 3, 357–366.
22. Moilanen, P. 2000. Interpretation, Truth and Correspondence. *Journal for the Theory of Social Behavior*. Blackwell Publishers Ltd. 30 (4), 377–390.
23. Nathanson, D.E. 1989. Using Atlantic bottlenose dolphins to increase cognition of mentally retarded children. *Clinical and Abnormal Psychology*, 233-242, ed. P. Lovibond and P. Wilson. North Holland: Elsevier.

24. Nathanson, D.E., deFaria, S. 1993. Cognitive improvement of children in water with and without dolphins. *Anthrozoös*, 6 (1), 17-29.
25. Nimer, J., Lundahl, B. 2007. Animal-Assisted Therapy: A Meta-Analysis. *Anthrozoös*, Vol. 20, Issue 3, 225–238.
26. Rugevičius, M., Kirkutis, A., Žakaitienė, A., Šostakienė, N., Kirkutytė, I. 2006. Dolphin therapy for autistic children: educational effects. *ATEE. Spring University. Changing Education in Changing Society*. Klaipėda: KU leidykla. Nr. 1, 100–105.
27. Šostakienė N., Kirkutytė I., Baliūnienė J.D., Kirkutis A., Rugevičius M., Kreiviniene B. 2007. Delfinų terapijos įtaka turinčių autizmą vaikų psichosocialinei reabilitacijai. *Sveikatos mokslai*. 1, T17.
28. Velde, B.P., Cipriani, J., Fisher, G. 2005. Resident and Therapist Views of Animal-Assisted Therapy: Implications for Occupational Therapy Practice. *Australian Occupational Therapy Journal*. 52, 43–50.

DELFINŲ TERAPIJA KAIP INOVATYVUS MOKYMOSI METODAS

Brigita Kreiviniene, Juha Perttula

S a n t r a u k a

Straipsnyje pristatoma delfinų terapija kaip inovatyvus mokymosi metodas vaikams su įvairiomis negalėmis. Taip pat straipsnyje yra apžvelgiama istorinė delfinų terapijos raida nuo idėjos susikūrimo iki šio gyvūnų terapijos metodo legalaus įteisavimo ir išsivystymo į plačią bei į šeimą orientuotą programą. Naujai išvystyta programa yra suprantama kaip inovatyvi mokymosi praktika vaikams su negale ir jų šeimos nariams, kuri galėtų būti integruota į mokymosi procesą. Straipsnio **tikslas** yra remtis viena klasikine gyvūnų terapijos forma, vadinama delfinų terapija, ir išanalizuoti kaip delfinų terapija pasiekė inovatyvaus metodo lygmenį vaikams su negale ir jų šeimos nariams Lietuvoje. **Tyrimo metodai**. Straipsnyje pristatomas kokybinis tyrimo metodas su atlikta content (turinio) analize. Dešimt šeimų, auginančių vaikus su cerebriniu paralyžiumi dalyvavo šiame tyrime. Tyrimo rezultatai atskleidė, jog edukacinė sfera yra gana palaikanti ir pozityviai nusiteikusi šeimų, norinčių vykdyti delfinų terapijos seansus, atžvilgiu. Dauguma pedagogų šią programą suvokia labiau kaip palaikymą, atsipalaidavimą visai šeimai nei tam tikrų akademinių rezultatų siekį. Šie tyrimo rezultatai yra svarbūs ateityje plėtojant kolaboracinius ryšius tarp delfinų terapijoje dirbančių specialistų ir pedagogų, dirbančių negalės srityje.